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How to use this Digital Performer 2.1 file
to calibrate audio playback and recording
under Sound Manager on your Power Macintosh

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Sound Manager adds slight timing offsets to audio that it records and plays back, and these offsets vary by type of Macintosh. Digital Performer detects what type of Mac it is running on and calibrates itself to compensate for these Sound Manager-induced offsets. Usually, the result is that audio plays perfectly in time with MIDI.

There may be some cases, however, where Digital Performer's automatic calibration won't quite be enough. The Digital Performer file that accompanies this document lets you check Sound Manager timing on your computer. It is a Version 2.1 file and can only be opened in Digital Performer 2.1 or later.

Open the calibration file, assign the MIDI track to a General MIDI drum kit in your MIDI rig (do not use Quicktime Musical Instruments), and press play. The file contains one MIDI track and one audio track. Both tracks contain quarter note snare hits placed precisely on each downbeat. They should play exactly together, with no flamming. Adjust the audio levels of the MIDI and audio signals so that when you listen, you can make a good comparison. It also helps to use a MIDI snare sound that closely matches the audio snare. Also try to use a dry snare sound.

In most circumstances, the MIDI and audio should play exactly in time with one another. But if you do hear flamming, Digital Performer lets you fine-tune the offset for the audio to get it to line up perfectly with MIDI. To do so, choose 'MOTU Audio System Options>Fine-tune Audio I/O Timing' from the Basics menu. Type in an offset in samples (try 100-sample increments at first) in the playback offset option, click OK and try playing again. Repeat this procedure until the MIDI and audio snare hits play together.

Once you have fine-tuned Sound Manager's playback offset, you can also fine-tune the recording offset. To do so, you need to record the MIDI snare hits in the calibration file back into the file as audio and then compare the recorded version with the original, "live" MIDI version. Here's how you do this:

1. With the appropriate audio cable (or other audio connection), route the MIDI snare signal to the Macintosh's microphone input (or other Sound Manager input).

2. Record-enable the extra, empty audio track provided in the calibration file, and make sure its audio input assignment matches the input you are recording from.

3. Check your levels and get ready to record.

4. Press the record button and record several measures of the MIDI snare.

5. When you are finished recording, play back what you have recorded, comparing it to the original MIDI snare track as you listen. If you hear flamming, adjust the Recording Offset option in the Fine-Tune Audio I/O Timing dialog.

6. Repeat the procedure as many times as needed to fine-tune the timing.